

REMARKS

Claims 1, 12-13 and 15-16 are amended. New claims 29 and 30 are added. Claims 1-16 and 29-30 are pending in the application.

Claims 1-3 and 12-14 stand rejected under 35 U.S.C. § 102 as being anticipated by Yu, U.S. Patent No. 6,110,780. The Examiner is reminded by direction to MPEP § 2131 that anticipation requires each and every element of a claim to be disclosed in a single prior art reference. Claims 1-3 and 12-14 are not anticipated by Yu for at least the reason that the reference fails to disclose each and every limitation in any of those claims.

As amended, independent claim 1 recites introducing nitrogen into a non-oxide material to form a nitrogen-comprising surface region layer across at least some of an exposed silicon surface of a semiconductor substrate, where the surface region extends greater than 0 Angstroms and no greater than 10 Angstroms beneath the exposed silicon surface. Claim 1 further recites subsequently growing an oxide region. The amendment to claim 1 is supported by the specification at, for example, Fig. 4 and page 7, line 17 through page 8, line 5. Yu discloses formation of a nitrogen-containing silicon oxide film 18 having a thickness of between about 10 and 30 Angstroms (col. 3, ll. 1-5). Yu does not disclose the claim 1 recited introducing nitrogen into a non-oxide material to form a nitrogen-comprising surface region layer across at least some of an exposed silicon surface where the surface region extends greater than 0 and no greater than 10 Angstroms beneath the exposed silicon surface. Accordingly, independent claim 1 is not anticipated by Yu. Further, Yu does not suggest the recited introducing nitrogen into a non-oxide material and claim 1 is therefore not rendered obvious by Yu.

Dependent claims 2 and 3 are not anticipated by Yu for at least the reason that they depend from allowable base claim 1.

As amended, independent claim 12 recites introducing nitrogen to form a nitrogen-comprising oxide layer across a first oxide region and a nitrogen-comprising non-oxide layer across at least some of a second portion of a semiconductor substrate, and subsequently growing an oxide. As indicated above, Yu does not disclose or suggest the recited introduction of nitrogen to form a nitrogen-comprising non-oxide layer across at least a portion of a semiconductor substrate. Accordingly, independent claim 12 is allowable over Yu for at least reasons similar to those discussed above with respect to independent claim 1.

Dependent claim 13 is amended to properly depend from independent claim 12. Claims 13 and 14 are allowable over Yu for at least the reason that they depend from allowable base claim 12.

Claims 4-11 and 15-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yu in combination with Okuno, U.S. Patent No. 6,110,842. As indicated above, independent claims 1 and 12 are not anticipated or rendered obvious by Yu. The Examiner indicates at page 6 of the present Action that Okuno is relied upon as showing remote plasma nitridation. However, as combined with Yu the remote plasma nitridation disclosed by Okuno does not contribute toward suggesting the claim 1 and claim 12 recited introducing nitrogen into a non-oxide material to form a nitrogen-comprising non-oxide layer, and subsequently growing an oxide. Accordingly, independent claims 1 and 12 are not rendered obvious by the cited combination of Yu and Okuno and are allowable over these references.

Dependent claims 15 and 16 are amended to properly depend from independent claim 12. Dependent claims 4-11 and 15-16 are allowable over the combination of Yu and

Okuno for at least the reason that they depend from corresponding allowable base claims 1 and 12.

New claims 29 and 30 do not add "new matter" to the application since each is fully supported by the specification as originally filed. Claims 29 and 30 are supported by the specification at, for example, page 7, line 17 through page 8, line 5 and page 11, lines 5-14.

For the reasons discussed above claims 1-16 are allowable and claims 29-30 are believed allowable. Accordingly, Applicant respectfully requests formal allowance of pending claims 1-16 and 29-30 in the Examiner's next action.

Respectfully submitted,

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By:

Jennifer J. Taylor
Jennifer J. Taylor, Ph.D.
Reg. No. 48,711